Rejections

Claims 21-23 stand rejected under 35 USC §102(b) as being anticipated by, or in the alternative, under 35 USC §103(a) as unpatentable over, "Friese, '100." Applicants respectfully traverse this rejection.

At the outset, Applicants note that no citation of art has been received from the Office. None of the Office Actions have included a PTO-892 form or an initialed copy of the PTO-1449 form submitted on or about November 10, 2000. Thus, Applicants can only assume that "Friese, '100" is US Pat. No. 4,816,100 ("Friese"). The Examiner is asked to confirm this assumption in the next paper issued in this application.

The present invention relates to a method for the manufacture of a tampon, and it comprises several specific steps. The steps include (a) unwinding a web of liquid-permeable, thermoplastic apertured film, (b) forming a line of weakness comprising perforations and scores extending substantially from the first edge to the second edge, (c) applying a force substantially parallel to the length of the web sufficient to separate an individual sheet from the web at the line of weakness, (d) positioning the individual sheet over an absorbent sliver, (e) attaching the individual sheet to the absorbent sliver, (f) forming the absorbent sliver into a tampon blank, and (g) compressing the tampon blank to form a substantially cylindrical, compressed tampon having a cover comprising the individual sheet. (Page 5, line 16- page 6, line 2.) The web has opposed first and second edges and a substantially infinite length. (Page 4, lines 13-15.)

Materials that are suitable for use as the liquid permeable sheet include materials such as polymeric films, fibrous nonwovens, foams, paper, and woven fibers. (Page 11, lines 13-16.) A representative, non-limiting list of polymeric films that may be used with the present invention include polyolefins, such as polypropylene and polyethylene; polyolefin copolymers, such as ethylene-vinyl acetate ("EVA"), ethylene-propylene, ethylene-acrylates, and ethylene-acrylic acids and salts thereof; halogenated polymers; polyesters and polyester copolymers; polyamides and polyamide copolymers; polyurethanes and polyurethane copolymers; and the like. (Page 11, lines 18-27.) The polymeric films may be apertured and/or embossed. (Page 11, line 28.) Films containing embossments and voids, such as apertures, may require engineering optimization. (Page

12, lines 1-4.) However, the invention of Claims 21-23 requires, inter alia, "unwinding a web of liquid-permeable, thermoplastic apertured film" (emphasis added).

Friese discloses a tampon for feminine hygiene having a cover formed of a liquid permeable, thermoplastic strip section that is heat-sealed to the outside of a nonwoven ribbon section. (Column 2, lines 45-48.) The strip section is further described as a nonwoven liquid permeable thermoplastic. (Column 3, lines 43-44.) Cutting rollers cut through the strip in a transverse direction substantially but not completely, so that the leading strip section formed as a result of cutting is still joined to the following strip by means of some small so-called webs. (Column 8, lines 42-46.) The strip section coming from the cutting station is sucked against the circumference of the vacuum roller and in a stretched position, is carried in a clockwise direction in the nip formed by the vacuum roller with the acceleration roller. (Column 8, lines 61-66.) The strip section is accelerated to double the speed and is consequently torn off completely from the following nonwoven strip in the region in the cut made in the cutting station. (Column 8, line 68 to Column 9, line 4.)

In making the rejection, the Office asserts that Friese discloses an apertured film. (Paper 11 at 2.) Applicant previously requested clarification from the Office as to where in Friese the phrase "apertured film" appears as Applicant is unable to find such a reference. Applicant again respectfully requests clarification.

As well settled, anticipation requires "identity of invention." Each and every element recited in a claim must be found in a single prior art reference and arranged as in the claim. Furthermore, there must be no difference between what is claimed and what is disclosed in the applied reference. Moreover, it is incumbent upon the Office to identify wherein each and every facet of the claimed invention is disclosed in the applied reference. In the present case, the Office Action has failed to exhibit this.

At the outset, it is respectfully submitted that Friese does not disclose as much as the Office Action contends. In particular, it fails to set forth where in Friese there is a disclosure of the expressly required apertured film. While the Office Action asserts (in Paper 11 at 2) that the thermoplastic, liquid-permeable nonwoven of Friese must be a apertured film because it is liquid-permeable, this is simply not in evidence. According to Hawley's Condensed Chemical Dictionary, Fourteenth Edition, "nonwoven fabric"

means a "fabric made from staple lengths of cotton, rayon, glass, or thermoplastic synthetic fiber mechanically positioned in a random manner. The sheets can be pressed together to form porous mats of high absorbency..." Hawley's also cites "film" as meaning "an extremely thin continuous sheet of a substance that may or may not be in contact with a substrate" and "[T]he protective value of any film depends on its being 100% continuous, i.e., without holes or cracks, since it must form an efficient barrier to molecules of atmospheric water vapor, oxygen, etc." In order for such a film to become liquid permeable, it must be apertured. Friese does not disclose apertured films. As such, the rejection is improper and should be withdrawn.

Additionally, Friese does not disclose forming a line of weakness comprising perforations and scores as expressly required in Claim 21. According to Merriam-Webster's Collegiate Dictionary (www.m-w.com), the word "perforate" means "to make a line of holes in to facilitate separation." Nothing in the definition refers to scoring, which is defined in the present specification on page 7, line 9 as "a non-though cut." In fact, Friese discloses perforations and tearing, not perforations and scoring as the Examiner asserts in Paper 9 at page 4. As such, the rejection of claims 21-23 under 35 USC §102(b) is improper and should be withdrawn.

Again, the Office Action asserts that Friese discloses the present method as claimed. The Office has previously asserted that that forming a line of weakness in the web by the cutting method leaves the web joined by "small so-called webs" and interprets this as meaning that the line of weakness comprises perforations and scores. (Paper 9 at 4.) That Office Action then concluded that "the use of perforations and scores, as broadly claimed, would have been obvious to one of ordinary skill in the art, as it would have been an obvious matter of design choice to make the different portions of the line of weakness of whatever form or shape was desired or expedient." (Paper 9 at 4.)

At the outset, Claim 21 requires the web to be a liquid-permeable thermoplastic film and the line of weakness to comprise perforations and scores. Friese discloses a liquid-permeable nonwoven, which is separated by perforations and tearing.

With all due respect, the Office Action has mischaracterized the liquid-permeable nonwoven fabric of Friese. Additionally, as detailed on page 3 of the present specification, the partially severed nonwoven of Friese is relatively controllable during

further separation. The unsevered strands of material will not elongate significantly, and the partially separated section of material remains controlled during final separation due to the continuous fibers present that can be stretched and/or straightened. (Page 3, lines 19-24.) Continuous webs, such as apertured films, are less controllable in the process of Friese. (Page 3, lines 25-26.) Therefore there are different problems faced by one skilled in the art using a nonwoven fabric cover material and one using an apertured film cover material. The different problems faced by these practitioners would not necessarily lead one of ordinary skill in the art to modify the teachings of Friese as required in the presently claimed invention. Thus, Applicants respectfully submit that the Office has failed to show motivation for one of ordinary skill in the art to use the teachings of Friese, modified in the unique way of the claimed invention.

Applicants believe that the foregoing present a full and complete response to the outstanding Office Action. Applicants look forward to an early notice of allowance for this application.

Respectfully submitted,

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February 5, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The application was amended as follows:

In the Specification

The paragraph at page 8, lines 11 to 17, was amended as follows:

The perforated and scored material can be attached to an absorbent structure as generally disclosed in Friese, US Patent No. 4,816,100, or as disclosed in US Serial No. [_____] 60/141688, filed June 30, 1999, entitled "Sealing Roller and Sealing Roller Element, Particularly for Producing a Tampon for Feminine Hygiene and Method Therefor[e]" [(Attorney Docket, J&J-1819)].

The paragraph beginning at page 12, line 21, was amended as follows:

The invention is also well suited to separate laminated films, especially those with different physical characteristics in different laminate layers. In particular, this invention is especially suited to multilayered apertured films as described in [_____] Johnson et al., copending application US Ser. No. [_____] 09/345,090, filed June [__] 30, 1999, entitled "Multilayered Apertured Film Wrapping Element for Absorbent Articles" [(Attorney Docket, PPC-691)]. As shown in Figures 5 and 6, the scores 51 between severed regions in a multilayered film may completely cut through one or more surface layers to reduce or eliminate their influence in the second severing step. This is especially effective when the intermediate layer of a three layered laminate is formed of a ductile material that has a low elastic modulus.

Hawley's

Condensed Chemical Dictionary

Fourteenth Edition

Revised by

Richard J. Lewis, Sr.

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Library of Congress Cataloging-in-Publication Data:

Condensed chemical dictionary.
Hawley's condensed chemical dictionary.—14th ed./ rev. by Richard J. Lewis, Sr. p. cm.
Includes index.
ISBN 0-471-38735-5 (cloth: acid-free paper)
1. Chemistry—Dictionaries. I. Title: Condensed chemical dictionary. II Hawley, Gessner Goodrich, 1905– III. Lewis, Richard J., Sr. IV. Title.

QD5 C5 2002
540".3--dc21 2001045614

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

sten, gold) or a metal carbide.
See fiber.

filament winding. The process of winding fibers under tension onto a prepared core. Before or during the winding operation, the assembly is impregnated with a thermosetting resin. Structures of considerable size and strength can be made in this way. The fibers used are chiefly glass, boron, or silicon carbide.
See filament.

filler. (1) An inert mineral powder of rather high specific gravity (2.00–4.50) used in plastic products and rubber mix to provide a certain degree of stiffness and hardness and to decrease cost. Examples are calcium carbonate (whiting), barytes, blanc fixe, silicates, glass spheres and bubbles, slate flour, soft clays, etc. Fillers have neither reinforcing nor coloring properties, and the term should not be applied to materials that do, i.e., reinforcing agents or pigments. Fillers are similar to extenders and diluents in their cost-reducing function; exact lines of distinction between these terms are difficult, if not impossible, to draw. Use of fillers and extenders in plastics has increased in recent years due to shortages of basic materials.
(2) The cross or transverse thread in a fabric or other textile structure.
(3) A metal or alloy used in brazing and soldering to effect union of the metals being joined. See diluent; extender; reinforcing agent.

film. An extremely thin continuous sheet of a substance that may or may not be in contact with a substrate. There is no precise upper limit of thickness, but a reasonable assumption is 0.010 inch. The protective value of any film depends on its being 100% continuous, i.e., without holes or cracks, since it must form an efficient barrier to molecules of atmospheric water vapor, oxygen, etc. A long-chain fatty acid or alcohol on water produces a film whose thickness is the length of one molecule (approximately 200 Å). The fatty acid molecules are oriented with the radical end in the water. Such films are good evaporation barriers and have been successfully imposed on glass. Soap bubbles are elastic films about one micron thick and have considerable strength. Film-forming agents (drying oils) are essential in paints and lacquers. Oxide films formed automatically on the surface of aluminum protect it from corrosion. Thin metallic oxide films are widely used in electronic and semiconducting devices. Electrodeposited metals (chromium, copper, nickel) are conventionally (and perhaps illogically) called coatings. The term film is also applied to sheets of cellophane, polyethylene, polyvinylidene chloride, etc., used for wrapping and packaging of food products, meats, and poultry (especially shrink films that are stretched before application). These function as a moisture vapor barrier. Plastic films are also used as slip surfaces in concrete structures such as airstrips, ice rinks, and highways. Photographic film is made from cellulose acetate.

filter. See filtration; leaf, filter; bagh use.

filter aid. See filter media; filtration.

filter alum. See aluminum sulfate.

filter medium. Almost any water-insoluble, porous material having a reasonable degree of rigidity can serve as a filter. Sand is used in simple large-scale water filtration, the voids between the grains providing the porosity. In industrial operations, cotton duck, woven wire cloth, nylon cloth, and glass cloth are used. For laboratory work, Whatman filter paper, diatomaceous earth, and closely packed glass fibers are standard materials. Plastics membranes containing more than a million pores per square inch are used in bacteriological filtration.
See filtration; screen.

filter sand. Sand used to separate sediment and suspended matter from water.

filtration. The operation of separating suspended solids from a liquid (or gas) by forcing the mixture through a porous barrier (see filter media). The construction and operation of the many kinds of industrial filtration equipment are too detailed to permit description. The most widely used types may be classified as follows: (1) gravity filters, used largely for water purification and consisting of thick beds of sand and gravel that retain the flocculated impurities as the water passes through (2) pressure filters of plate-and-frame or shell-and-leaf construction that utilize filter cloths of coarse fabric as a separating medium; (3) vacuum or suction filters of the rotating drum or disk type, used on thick sludges and slurries; (4) edge filters; (5) clarification filters; (6) bag filters (dust collectors). Gel filtration is a chromatographic technique involving separation at the molecular level. For bacteriological filtration, membranes having more than a million pores per square inch are used, e.g., collodion or synthetic film. Some types of viruses will pass through such membranes and are thus known as filterable viruses.
See baghouse.

fine chemical. A chemical produced in comparatively small quantities and in a relatively pure state. Examples are pharmaceutical and biological products, perfumes, photographic chemicals, and reagent chemicals.

fines. The portion of a powder composed of particles that are smaller than a specified size (MPA definition, MPA Standard 9–50T).

finishing compounds. Materials that impart softness, flexibility, stiffness, color, water and fire resistance, etc.

ble in three volumes of 70% alcohol, in mineral oil; insoluble in glycerol. Combustible.
Grade: Technical, FCC.
Use: Perfumery, flavoring agent.

nonane. (nonyl hydride).
CAS: 111-84-2. C_9H_{20} or $CH_3(CH_2)_7CH_3$.
Properties: Colorless liquid. D 0.722, bp 150.7C, fp −54C, refr index 1.40561 (20C), flash p 86F (30C) (CC), autoign temp 403F (206C).
Grade: Technical (95%), 99%, research. Soluble in alcohol; insoluble in water.
Hazard: Flammable, moderate fire risk. Irritant, narcotic in high concentration. TLV: 200 ppm.
Use: Organic synthesis, biodegradable detergents, distillation chaser.

nonanedioic acid. See azelaic acid.

nonane-1,3-diol monoacetate.
$C_9H_{18}OOCCH_3$.
Properties: A mixture of isomers, colorless to slightly yellow liquid. Stable; soluble in alcohol. Combustible.
Use: Perfumery, flavoring.

***n*-nonanoic acid.** See pelargonic acid.

nonanol. See nonyl alcohol.

noncombustible material. A solid, liquid, or gas that will not ignite or burn, regardless of how high a temperature it is exposed to, e.g., silicon dioxide, water, carbon dioxide.
See nonflammable material.

nondestructive testing. A test that does not involve destruction of the sample or material tested. Such tests are usually carried out by radiographic methods on large, finished metal products (castings and machine components) to determine the presence of internal defects likely to cause operational failure. An infrared camera scanning device for detection of internal weaknesses in tires is a recent development in nondestructive testing. X-radiation is used to determine the authenticity of paintings and other objects of art.
See testing.

nondrying oil. See drying oil

nonelectrolyte. A compound that resists passage of electricity (nonconductor) both in liquid form and in solution. Included in this classification are most organic compounds, with the exception of acids and amides, and such inorganic compounds as nonmetal halides. Nonelectrolytes are covalently bonded; some inorganic compounds having covalent bonds form electrolytic solutions in aqueous solution.
See electrolyte.

nonene. See nonylene.

nonmetal. (1) Any of a number of elements whose electronic structure, bonding characteristics, and consequent physical and chemical properties differ markedly from those of metals, particularly in respect to electronegativity and thermal and electrical conductivity. In general, nonmetals have very low to moderate conductivity and high electronegativity. The 25 elements classified as nonmetals may be considered in two groups: (a) those having moderate electrical conductivity (semiconductors), all of which are solids, and (b) those having very low conductivity, many of which are gases. The semiconductors of group (a) were formerly called metalloids since they more nearly resemble metals than those of the group (b), but this term is no longer used by chemists. The nonmetals are given below based on this subgrouping, though any such list is open to challenge:

(a)	(b)	
arsenic	polonium	halogens
antimony	phosphorus	hydrogen
boron	selenium	nitrogen
carbon	silicon	oxygen
germanium	tellurium	noble gases
	sulfur	

(2) Loosely, any material that is not a metal, e.g., petroleum, plastics, waxes, etc. The term is widely used in this sense by engineers and specification writers.

non-Newtonian behavior. A property possessed by some fluids and many plastic solids, including lubricating grease, of having a variable relationship between shear stress and rate of shear.

***n*-nonoic acid.** See pelargonic acid.

nonoic acid. An acid of the formula $C_8H_{17}COOH$ of which there are many possible isomers. Pelargonic acid is the normal or straight-chain acid. A mixture of various branched-chain nonoic acids is recovered from products of the Oxo process.

nonpolar. A substance whose molecules possess no permanent electric moments. One whose atoms are linked by sharing of an electron pair and that are not electrolytes in the liquid state. They do not ionize, or ionize weakly, in solution.

nonpolar molecule. A molecule with polar bonds that does not have an overall dipole. The vector sum of its dipoles is zero.

n nviscous neutral oil. A neutral oil of viscosity less than 135 SUS at 37.7C.

nonwoven fabric. A fabric made from staple lengths of cotton, rayon, glass, or thermoplastic synthetic fiber mechanically positioned in a random manner and usually bonded with a synthetic adhesive or rubber latex. The sheets thus formed can be

pressed together to form porous mats of high absorptivity and good elastic recovery on deformation. Permanent bonds are formed where the fibers touch each other as a result of heat treatment when the fibers are thermoplastic or by use of a high-polymer binder. Disposable filters of polyethylene and polyester can be made without a binder.

A specialty nonwoven (so-called "melded") fabric trademarked "Cambrelle" is a composite of two different polymers; heating the exterior layer to its melting point causes the fibers to fuse into a fabric.

Use: Applications are as a backing for plastic film; padding for surgical dressings, diapers, sanitary napkins; drapes and other decorative textile products; filtration; shoe liners; industrial wiping and polishing fabrics; disposable clothing; carpet backing.

_n_-nonyl acetate. (acetate C-9).
CAS: 143-13-5. $CH_3COO(CH_2)_8CH_3$.
Properties: Colorless liquid; strong pungent odor. D 0.864–0.868, refr index 1.422–1.426. Soluble in four volumes of 70% alcohol, flash p 155F (68.3C), several isomers exist. Combustible.
Use: Perfumery, flavoring.

_n_-nonyl alcohol. (nonanol; alcohol C-9; octyl carbinol; pelargonic alcohol).
CAS: 143-08-8. $CH_3(CH_2)_7CH_2OH$.
Properties: Colorless liquid; floral odor. D 0.826–0.829, refr index 1.431–1.435, fp −5C, bp 215C, flash p 165F (73.9C). Soluble in seven volumes of 50% alcohol; insoluble in water. Several isomers exist. Combustible.
Use: Perfumery, flavoring (lemon oil).

_n_-nonylamine. $C_9H_{19}NH$.
Properties: Colorless liquid. Bp 75–85C (20 mm Hg), d 0.798 (25C), refr index 1.4366 (20C). May be prepared from nonyl halides by conventional techniques. Combustible.
Hazard: Moderate fire risk. Skin irritant.

***tert*-nonylamine.** Principally *tert*-$C_9H_{19}NH_2$ and *tert*-$C_{10}H_{21}NH_2$.
Properties: Colorless liquid. Boiling range 160–174C, d 0.789 (25C), refr index 1.428 (25C), flash p 120F (48.9C). Insoluble in water; soluble in common organic solvents; especially in petroleum hydrocarbons. Combustible.
Hazard: Moderate fire risk. Skin irritant.
Use: Intermediate for rubber accelerators, insecticides, fungicides, dyestuffs, pharmaceuticals.

nonylbenzene. (1-phenylnonane). $C_9H_{19}C_6H_5$.
Properties: Light-straw liquid; aromatic odor. Boiling range 245–252C, d 0.864 (20/20C), refr index 1.488 (20C), viscosity 41.9 cP (20C), flash p (CC) 210F (98.9C). Combustible.
Hazard: Irritant; narcotic in high concentration.
Use: Manufacture of surface-active agents.

nonyl bromide. $C_9H_{19}Br$.
Properties: Liquid. Bp 81–85C (10 mm Hg), d 1.101 (25C), refr index 1.4583 (20C). Nonflammable.
Derivation: High yields of nonyl bromide are obtained by passing hydrogen bromide into the alcohol while heating or by refluxing with aqueous hydrogen bromide in the presence of an acid catalyst.

nonyl chloride. $C_9H_{19}Cl$.
Properties: Liquid. Bp 58–63C (8 mm Hg), d 0.878 (25C), refr index 1.4379 (20C). Nonflammable.
Derivation: Nonyl alcohol reacts with hydrochloric acid at elevated temperatures and pressures to give nonyl chloride. It can also be made by refluxing a mixture of concentrated hydrochloric acid with alcohol in the presence of zinc chloride.

1-nonylene. (1-nonene). C_9H_{18} or $CH_3(CH_2)_6CH{:}CH_2$.
Properties: Colorless liquid. D 0.7433, bp 149.9C. Soluble in alcohol; insoluble in water. Combustible.
Derivation: From propylene.

nonyl hydride. See nonane.

***n*-nonylic acid.** See pelargonic acid.

γ-nonyl lactone. (aldehyde C-18; 4-hydroxynonanoic acid, γ-lactone; γ-nonalactone).
$CH_3(CH_2)_4CHCH_2CH_2C(O)O$.
Properties: Yellowish to almost colorless liquid; coconut-like odor. D 0.956–0.963, refr index 1.447. Soluble in five volumes of 50% alcohol; soluble in most fixed oils and mineral oil; practically insoluble in glycerol. Combustible.
Grade: Technical, FCC.
Use: Perfumery, flavors.

nonyl nonanoate. (nonyl pelargonate).
$C_9H_{19}OOCC_8H_{17}$.
Properties: Liquid; floral odor. D 0.863 (25C), bp 315C, refr index 1.4419 (20C). Combustible.
Use: Flavors, perfumes, organic synthesis.

nonylphenol.
CAS: 25154-52-3. $C_9H_{19}C_6H_4OH$. A mixture of isomeric monoalkyl phenols, predominantly *p*-substituted.
Properties: Pale-yellow, viscous liquid; slight phenolic odor. D 0.950 (20/20C), bp 293C, fp −10C (sets to glass below this temperature), viscosity 563 cP (20C), flash p 285F (140.5C). Insoluble in water; soluble in most organic solvents. Combustible.
Grade: Technical.
Use: Nonionic surfactant (nonbiodegradable), lubricating-oil additives, stabilizers, petroleum demulsifiers, fungicides, antioxidants for plastics and rubber.

nonylphenoxyacetic acid.
$C_9H_{19}C_6H_4OCH_2COOH$.
Properties: Light amber liquid. Miscible with organ-